



Spectral Gamma-Ray Borehole
Log Data Report

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Borehole

41-04-01

Log Event A

Borehole Information

Farm : <u>SX</u>	Tank : <u>SX-104</u>	Site Number : <u>299-W23-140</u>
N-Coord : <u>35,488</u>	W-Coord : <u>75,641</u>	TOC Elevation : <u>663.05</u>
Water Level, ft : <u>94.10</u>	Date Drilled : <u>3/15/1972</u>	

Casing Record

Type : <u>Steel-welded</u>	Thickness : <u>0.280</u>	ID, in. : <u>6</u>
Top Depth, ft. : <u>0</u>	Bottom Depth, ft. : <u>100</u>	

Equipment Information

Logging System : <u>1</u>	Detector Type : <u>HPGe</u>	Detector Efficiency: <u>35.0 %</u>
Calibration Date : <u>03/1995</u>	Calibration Reference : <u>GJPO-HAN-1</u>	

Logging Information

Log Run Number : <u>1</u>	Log Run Date : <u>5/12/1995</u>	Logging Engineer: <u>Bob Spatz</u>
Start Depth, ft.: <u>0.0</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>79.0</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

Log Run Number : <u>2</u>	Log Run Date : <u>5/15/1995</u>	Logging Engineer: <u>Bob Spatz</u>
Start Depth, ft.: <u>97.5</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>78.0</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

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Analysis Information

Analyst : J.R. BrodeurData Processing Reference : Data Analysis Manual Ver. 1Analysis Date : 6/27/1995**Analysis Notes :**

The single steel casing as measured in the field and shown on the drilling log was 5/16 in. thick (0.3125). The casing correction used for all of the log data was 0.33 in., causing the reported concentrations to possibly be slightly higher than actual.

Cs-137 was the only man-made radionuclide detected. It was found from the surface to about 20 ft above 1 pCi/g and at detectable concentrations at spotty locations to total depth.

Log Plot Notes:

Three log data plots are provided. The cesium concentration is provided in a separate plot to document the concentration and show the shape of the cesium distribution. The error of the cesium concentration determination is shown by the error bars and represents the 95 percent confidence interval. The MDA is shown on this plot as open circles.

A plot of naturally occurring potassium, uranium and thorium (K-40, U-238, and Th-232) is provided to permit correlation of these data with the geologic information. These plots also show the calculated MDA values as open circle data points. On the Th-232 plot, the MDA is shown as 0 at some depth locations. This is due to an error in the spectrum analysis program and should be ignored.

A combination plot of individual radionuclide concentrations is provided for correlation purposes. This plot contains the Cs-137 log, the natural gamma logs, a log of the total gamma count rate calculated from the spectra data and a log of the WHC Tank Farms gross gamma-ray data. The Tank Farms gross gamma log is provided to allow the correlation of the spectral gamma data with the historical record.